

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2010; month=8; day=30; hr=10; min=48; sec=25; ms=714;]

=====

Application No: 10591787 Version No: 4.0

Input Set:

Output Set:

Started: 2010-08-23 17:48:50.682
Finished: 2010-08-23 17:49:02.939
Elapsed: 0 hr(s) 0 min(s) 12 sec(s) 257 ms
Total Warnings: 5
Total Errors: 0
No. of SeqIDs Defined: 91
Actual SeqID Count: 91

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)

SEQUENCE LISTING

<110> Nagaike, Kazuhiro
Mori, Yasuko
Gomi, Yasuyuki
Takahashi, Michiaki
Kouichi, Yamanishi

<120> Recombinant varicella-zoster virus

<130> 59150-8037

<140> 10591787
<141> 2010-08-23

<150> PCT/JP2005/003652
<151> 2005-03-05

<150> JP 2004-063277
<151> 2004-03-05

<160> 91

<170> PatentIn version 3.2

<210> 1
<211> 35
<212> DNA
<213> Artificial

<220>

<223> primer

<400> 1

tataactagt gcggccgctt acgaaaacgt gcatg 35

<210> 2
<211> 34
<212> DNA
<213> Artificial

<220>

<223> primer

<400> 2

cgcgacctgg tttatttac aaactccttt gtgg 34

<210> 3
<211> 34
<212> DNA
<213> Artificial

<220>

<223> primer

<400> 3
gcgccaccagg tctctgttta gaccttaaaa tttg 34

<210> 4
<211> 34
<212> DNA
<213> Artificial

<220>

<223> primer

<400> 4
tatagcggcc gcttttaatc tggttgtgga aatg 34

<210> 5
<211> 4226
<212> DNA
<213> Varicella zoster

<220>

<221> CDS
<222> (229)..(4158)
<223> Varicella zoster

<220>

<221> misc_feature
<222> (99)..(99)
<223> The 'Xaa' at location 99 stands for Thr, or Met.

<220>

<221> misc_feature
<222> (512)..(512)
<223> The 'Xaa' at location 512 stands for Ala, or Val.

<220>

<221> misc_feature
<222> (1275)..(1275)
<223> The 'Xaa' at location 1275 stands for Ser, or Leu.

<400> 5
atactatggt ccatgaactt cccgcctcga gtctcggtcca atcactacat cgtcttatca 60

ttaagaatat ttacacggtg acgacacggg gagggaaatat gcgggtcgagg gggggggcaca 120

acacgttta agtactgttg gaactccctc accaaccgca aycgcaatcc tttgaaggct 180

gcgagagcgt ttggaaaact cgggtacgtc taaattcacc ccagygcg atg gat acg 237
Met Asp Thr
1

ccg ccg atg cag cgc tct aca ccc caa cgc gcg ggg tcg cct gat act 285
Pro Pro Met Gln Arg Ser Thr Pro Gln Arg Ala Gly Ser Pro Asp Thr

ttg gag tta atg gac ctg ttg gac gcg gcc gcc gaa cac			333
Leu Glu Leu Met Asp Leu Leu Asp Ala Ala Ala Ala Ala Glu His			
20	25	30	35
agg gcc cgg gtg gtc acc tcg agt cag cct gac gat cta cta ttt gga			381
Arg Ala Arg Val Val Thr Ser Ser Gln Pro Asp Asp Leu Leu Phe Gly			
40	45	50	
gag aac ggg gtc atg gtg gga cgg gaa cat gag atc gtt tca att ccc			429
Glu Asn Gly Val Met Val Gly Arg Glu His Glu Ile Val Ser Ile Pro			
55	60	65	
tcc gta tcg gga ctt caa cca gaa ccc aga acg gaa gat gtt ggc gaa			477
Ser Val Ser Gly Leu Gln Pro Glu Pro Arg Thr Glu Asp Val Gly Glu			
70	75	80	
gag cta aca caa gac gac tac gta tgc gag gac ggt cag gat cta ayg			525
Glu Leu Thr Gln Asp Asp Tyr Val Cys Glu Asp Gly Gln Asp Leu Xaa			
85	90	95	
ggc tcg cct gta atc ccg ctg gcc gag gtc ttc cac acc cga ttc tcg			573
Gly Ser Pro Val Ile Pro Leu Ala Glu Val Phe His Thr Arg Phe Ser			
100	105	110	115
gag gcc ggc cga gaa cca aca gga gcc gat cgc tcc ctc gag aca			621
Glu Ala Gly Ala Arg Glu Pro Thr Gly Ala Asp Arg Ser Leu Glu Thr			
120	125	130	
gtc tct ctc gga acg aag ctt gct agg tct cca aaa cca ccg atg aac			669
Val Ser Leu Gly Thr Lys Leu Ala Arg Ser Pro Lys Pro Pro Met Asn			
135	140	145	
gat ggg gaa acg ggc aga ggt acg acc cct ccg ttc ccg cag gcc ttc			717
Asp Gly Glu Thr Gly Arg Gly Thr Thr Pro Pro Phe Pro Gln Ala Phe			
150	155	160	
tcc cct gta tcc ccc gcg tct cct gtt gga gac gcc gcc ggg aac gat			765
Ser Pro Val Ser Pro Ala Ser Pro Val Gly Asp Ala Ala Gly Asn Asp			
165	170	175	
caa cgg gaa gac cag cgg tct ata ccc cga caa acg acg aga gga aat			813
Gln Arg Glu Asp Gln Arg Ser Ile Pro Arg Gln Thr Thr Arg Gly Asn			
180	185	190	195
tca cca ggt ttg ccg tcg gtg gtc cat cga gac aga caa act cag tcc			861
Ser Pro Gly Leu Pro Ser Val Val His Arg Asp Arg Gln Thr Gln Ser			
200	205	210	
atc tcg ggt aaa aag ccg ggc gat gag caa gcg ggt cat gcg cat gca			909
Ile Ser Gly Lys Lys Pro Gly Asp Glu Gln Ala Gly His Ala His Ala			
215	220	225	
tcg ggg gac gga gta gtt ctc cag aaa act caa ccg ccc gct cag gga			957
Ser Gly Asp Gly Val Val Leu Gln Lys Thr Gln Arg Pro Ala Gln Gly			
230	235	240	

aag agc ccg aag aaa aag act ttg aag gtt aag gtc cca ctc ccg gcg 1005
Lys Ser Pro Lys Lys Thr Leu Lys Val Lys Val Pro Leu Pro Ala
245 250 255

cgg aaa ccc ggt gga cct gta ccc ggc ccg gtt gag caa ttg tac cac 1053
Arg Lys Pro Gly Gly Pro Val Pro Gly Pro Val Glu Gln Leu Tyr His
260 265 270 275

gtc ctt tcg gac agc gtt ccc gct aag ggg gca aag gcg gac ctg ccg 1101
Val Leu Ser Asp Ser Val Pro Ala Lys Gly Ala Lys Ala Asp Leu Pro
280 285 290

ttt gag acc gat gat acc cgc cca agg aaa cat gat gcc cggt ata 1149
Phe Glu Thr Asp Asp Thr Arg Pro Arg Lys His Asp Ala Arg Gly Ile
295 300 305

aca cct cgc gtc cct gga cgt tcg tcg ggg ggc aaa cct aga gcg ttt 1197
Thr Pro Arg Val Pro Gly Arg Ser Ser Gly Gly Lys Pro Arg Ala Phe
310 315 320

ttt gcc ctg ccg gga aga tcc cac gca cca gac ccg att gag gat gac 1245
Leu Ala Leu Pro Gly Arg Ser His Ala Pro Asp Pro Ile Glu Asp Asp
325 330 335

agc ccg gtg gag aaa aag cca aag agt cgt gag ttt gtt tcg tct tca 1293
Ser Pro Val Glu Lys Lys Pro Lys Ser Arg Glu Phe Val Ser Ser Ser
340 345 350 355

tcc tct tcc tcg tcg tgg gga tcg tca tcg gag gat gaa gac gat gaa 1341
Ser Ser Ser Ser Trp Gly Ser Ser Glu Asp Glu Asp Asp Glu
360 365 370

ccc cgg cgc gtt tcg gtg gga agt gaa act aca ggc agc agg tcc gga 1389
Pro Arg Arg Val Ser Val Gly Ser Glu Thr Thr Gly Ser Arg Ser Gly
375 380 385

cgc gaa cac gcc cct tcc ccg tca aat tcg gat gat tcg gac tca aat 1437
Arg Glu His Ala Pro Ser Pro Ser Asn Ser Asp Asp Ser Asp Ser Asn
390 395 400

gat ggt ggg tcg acg aaa caa aat atc caa ccg gga tat cga tcc atc 1485
Asp Gly Gly Ser Thr Lys Gln Asn Ile Gln Pro Gly Tyr Arg Ser Ile
405 410 415

agc ggt ccc gat ccg agg att cgt aag acc aaa cgt ctt gcg ggg gaa 1533
Ser Gly Pro Asp Pro Arg Ile Arg Lys Thr Lys Arg Leu Ala Gly Glu
420 425 430 435

ccg ggg cgc cag aga cag aaa tca ttt tcc ctg ccg cga tcc aga acc 1581
Pro Gly Arg Gln Arg Gln Lys Ser Phe Ser Leu Pro Arg Ser Arg Thr
440 445 450

ccg ata att ccc ccg gtg tcg ggg ccg ctc atg atg ccc gac gga agc 1629
Pro Ile Ile Pro Pro Val Ser Gly Pro Leu Met Met Pro Asp Gly Ser
455 460 465

cct tgg ccc gga tcg gcg ccc ctc cca tcc aac agg gtg cggt ttt gga 1677

Pro	Trp	Pro	Gly	Ser	Ala	Pro	Leu	Pro	Ser	Asn	Arg	Val	Arg	Phe	Gly		
470																480	
ccg	tcc	ggg	gag	acc	aga	gag	ggt	cac	tgg	gag	gat	gag	gct	gtg	aga		1725
Pro	Ser	Gly	Glu	Thr	Arg	Glu	Gly	His	Trp	Glu	Asp	Glu	Ala	Val	Arg		
485																495	
gcg	gcg	cg	gct	cgt	tac	gag	gcc	tca	act	gaa	ccc	gyg	ccg	ctt	tac		1773
Ala	Ala	Arg	Ala	Arg	Tyr	Glu	Ala	Ser	Thr	Glu	Pro	Xaa	Pro	Leu	Tyr		
500																515	
gtg	ccg	gag	ttg	gga	gat	ccg	gct	aga	cag	tac	cgc	g	ctg	att	aac		1821
Val	Pro	Glu	Leu	Gly	Asp	Pro	Ala	Arg	Gln	Tyr	Arg	Ala	Leu	Ile	Asn		
520																530	
ctg	atc	tac	tgt	cca	gac	aga	gac	cct	ata	gca	tgg	ctc	cag	aac	ccc		1869
Leu	Ile	Tyr	Cys	Pro	Asp	Arg	Asp	Pro	Ile	Ala	Trp	Leu	Gln	Asn	Pro		
535																545	
aag	ctg	acc	ggt	gtc	aac	tcg	gcc	ctg	aac	cag	ttc	tac	caa	aag	ctg		1917
Lys	Leu	Thr	Gly	Val	Asn	Ser	Ala	Leu	Asn	Gln	Phe	Tyr	Gln	Lys	Leu		
550																560	
ttg	cca	ccg	gga	cg	g	ggt	acc	gcc	gtt	acg	ggg	agc	gta	g	ct		1965
Leu	Pro	Pro	Gly	Arg	Ala	Gly	Thr	Ala	Val	Thr	Gly	Ser	Val	Ala	Ser		
565																575	
ccc	gtt	ccg	cat	gta	ggc	gaa	gcc	atg	gcc	acg	ggg	agc	gta	g	ct		2013
Pro	Val	Pro	His	Val	Gly	Glu	Ala	Met	Ala	Thr	Gly	Glu	Ala	Leu	Trp		
580																595	
gct	ctc	ccc	cac	g	cg	g	cc	gt	g	ct	atg	agc	cgt	cg	tg		2061
Ala	Leu	Pro	His	Ala	Ala	Ala	Val	Ala	Met	Ser	Arg	Arg	Tyr	Asp			
600																610	
cg	gc	ca	aa	ca	tt	atc	ct	ca	cag	agt	ctc	cgc	ag	gc	ttt	gc	2109
Arg	Ala	Gln	Lys	His	Phe	Ile	Leu	Gln	Ser	Leu	Arg	Arg	Ala	Phe	Ala		
615																625	
ggc	atg	gca	ta	cc	g	g	ca	ac	gg	tcc	agt	ccg	g	cg	cg	atc	2157
Gly	Met	Ala	Tyr	Pro	Glu	Ala	Thr	Gly	Ser	Ser	Pro	Ala	Ala	Arg	Ile		
630																640	
tcc	cgc	ggt	cac	cct	tct	cca	aca	acc	ccg	gcc	aca	cag	act	ccc	gac		2205
Ser	Arg	Gly	His	Pro	Ser	Pro	Thr	Thr	Pro	Ala	Thr	Gln	Thr	Pro	Asp		
645																655	
cct	cag	ccg	tcg	gc	gc	gc	cg	tct	tct	gt	tgt	cc	ccg	gat			2253
Pro	Gln	Pro	Ser	Ala	Ala	Ala	Arg	Ser	Leu	Ser	Val	Cys	Pro	Pro	Asp		
660																675	
gat	cgt	tta	cga	act	ccg	cg	aag	cgc	aag	tcc	cag	cc	gtc	gag	agc		2301
Asp	Arg	Leu	Arg	Thr	Pro	Arg	Lys	Arg	Lys	Ser	Gln	Pro	Val	Glu	Ser		
680																690	
aga	agc	ctc	ctc	gac	aag	att	agg	gag	aca	ccc	gtc	g	cg	gac	gc	cg	2349
Arg	Ser	Leu	Leu	Asp	Lys	Ile	Arg	Glu	Thr	Pro	Val	Ala	Asp	Ala	Arg		

695	700	705	
gtt gca gac gat cat gtg gtt tcc aag gcc aag agg cg ^g gta tcc gag			2397
Val Ala Asp Asp His Val Val Ser Lys Ala Lys Arg Arg Val Ser Glu			
710	715	720	
ccc gtg acc atc acc tcg ggc cct gtg gtg gat ccc ccc gcc gta ata			2445
Pro Val Thr Ile Thr Ser Gly Pro Val Val Asp Pro Pro Ala Val Ile			
725	730	735	
acg atg cca ctt gac gga cc ^g gcc cca aac ggg gga ttt cg ^g cgt att			2493
Thr Met Pro Leu Asp Gly Pro Ala Pro Asn Gly Gly Phe Arg Arg Ile			
740	745	750	755
ccc cgg ggg gcc ctg cat acc cc ^g gtc cc ^g tcg gac cag gct cg ^c aag			2541
Pro Arg Gly Ala Leu His Thr Pro Val Pro Ser Asp Gln Ala Arg Lys			
760	765	770	
g ^c g tac tgt acc ccc gaa acc atc gcc cgt ctg gtc gac gac cca ttg			2589
Ala Tyr Cys Thr Pro Glu Thr Ile Ala Arg Leu Val Asp Asp Pro Leu			
775	780	785	
ttt ccc acg gcc tgg cg ^c cct gc ^g cta agc ttt gat ccc ggc gcc ttg			2637
Phe Pro Thr Ala Trp Arg Pro Ala Leu Ser Phe Asp Pro Gly Ala Leu			
790	795	800	
gc ^g gaa atc gcc gct cg ^g cgt cc ^g ggc gga gga gac cga cg ^g ttt ggt			2685
Ala Glu Ile Ala Ala Arg Arg Pro Gly Gly Asp Arg Arg Phe Gly			
805	810	815	
cca ccc agc gga gtg gag gc ^g ctg cga cg ^g agg tgc gcc tgg atg cg ^g			2733
Pro Pro Ser Gly Val Glu Ala Leu Arg Arg Arg Cys Ala Trp Met Arg			
820	825	830	835
cag atc cca gac cc ^g gag gat gtg agg ctt ctg atc atc tac gat cc ^g			2781
Gln Ile Pro Asp Pro Glu Asp Val Arg Leu Leu Ile Ile Tyr Asp Pro			
840	845	850	
ttg ccc gga gag gac atc aac ggc ccc ctc gag agc acc ctc gc ^g aca			2829
Leu Pro Gly Glu Asp Ile Asn Gly Pro Leu Glu Ser Thr Leu Ala Thr			
855	860	865	
gat cc ^g gga cc ^g tca tgg agt cca tcc cga ggg gga ctg tct gtg gtc			2877
Asp Pro Gly Pro Ser Trp Ser Pro Ser Arg Gly Gly Leu Ser Val Val			
870	875	880	
ctg gca gcc ctg agt aac cg ^g ttg tgc ctg cc ^g agc act cat gcc tgg			2925
Leu Ala Ala Leu Ser Asn Arg Leu Cys Leu Pro Ser Thr His Ala Trp			
885	890	895	
gcc ggg aac tgg acc ggc cc ^g cc ^g gac gtg tcc gct ttg aac gcc cg ^g			2973
Ala Gly Asn Trp Thr Gly Pro Pro Asp Val Ser Ala Leu Asn Ala Arg			
900	905	910	915
ggc gtt tta tta ctg tcg acc cga gac ctg gcc ttt gcc ggg gcc gtc			3021
Gly Val Leu Leu Leu Ser Thr Arg Asp Leu Ala Phe Ala Gly Ala Val			
920	925	930	

gag tat cta ggc tcg cgg ttg gcc tct gcc cgg cgc cgg ttg ctg gtg			3069
Glu Tyr Leu Gly Ser Arg Leu Ala Ser Ala Arg Arg Arg Leu Leu Val			
935	940	945	
ttg gac gcg gtg gcc ctc gag agg tgg ccc ggg gat gga ccc gct ttg			3117
Leu Asp Ala Val Ala Leu Glu Arg Trp Pro Gly Asp Gly Pro Ala Leu			
950	955	960	
tct cag tat cac gtg tac gtc cgg gcc ccg gcg cga ccg gac gcc cag			3165
Ser Gln Tyr His Val Tyr Val Arg Ala Pro Ala Arg Pro Asp Ala Gln			
965	970	975	
gcc gtc gtc cga tgg cca gac tcg gcg gtc aca gaa gga ctc gcc cgg			3213
Ala Val Val Arg Trp Pro Asp Ser Ala Val Thr Glu Gly Leu Ala Arg			
980	985	990	995
gcc gtg ttt gca tcg tcg cgc acc ttt ggg cca gcg agt ttt gct			3258
Ala Val Phe Ala Ser Ser Arg Thr Phe Gly Pro Ala Ser Phe Ala			
1000	1005	1010	
cgt atc gag act gcg ttt gcc aac ctg tac ccg ggc gaa caa ccc			3303
Arg Ile Glu Thr Ala Phe Ala Asn Leu Tyr Pro Gly Glu Gln Pro			
1015	1020	1025	
ctg tgt ttg tgc cgc ggt ggg aac gtc gca tac acc gtg tgt acc			3348
Leu Cys Leu Cys Arg Gly Gly Asn Val Ala Tyr Thr Val Cys Thr			
1030	1035	1040	
cgc gcg ggc ccc aag acc cgc gtc ccc ctg tcg ccc cgt gaa tac			3393
Arg Ala Gly Pro Lys Thr Arg Val Pro Leu Ser Pro Arg Glu Tyr			
1045	1050	1055	
cgg cag tac gtg ctg ccg ggt ttt gac ggt tgc aag gac ctc gcg			3438
Arg Gln Tyr Val Leu Pro Gly Phe Asp Gly Cys Lys Asp Leu Ala			
1060	1065	1070	
cga cag tct cgg ggt ctg ggg ctc ggg gca gcc gac ttt gtg gac			3483
Arg Gln Ser Arg Gly Leu Gly Leu Gly Ala Ala Asp Phe Val Asp			
1075	1080	1085	
gag gcg gca cat agc cac cgc gca gca aac cga tgg ggc ctg ggt			3528
Glu Ala Ala His Ser His Arg Ala Ala Asn Arg Trp Gly Leu Gly			
1090	1095	1100	
gcc gcg ctt cga ccc gtc ttc ctt ccc gag gga cgg aga ccg ggg			3573
Ala Ala Leu Arg Pro Val Phe Leu Pro Glu Gly Arg Arg Pro Gly			
1105	1110	1115	
gcc gcc ggg ccg gag gcc ggc gac gta ccc acc tgg gcg agg gtg			3618
Ala Ala Gly Pro Glu Ala Gly Asp Val Pro Thr Trp Ala Arg Val			
1120	1125	1130	
ttt tgc cgc cac gcc ctg ctg gaa ccc gac cct gcc gcg gaa cca			3663
Phe Cys Arg His Ala Leu Leu Glu Pro Asp Pro Ala Ala Glu Pro			
1135	1140	1145	

ctc	gtg	ctt	cca	ccc	gtg	gcc	ggt	cgg	tcg	gtg	gcg	ctg	tat	gct		3708		
Leu	Val	Leu	Pro	Pro	Val	Ala	Gly	Arg	Ser	Val	Ala	Leu	Tyr	Ala				
		1150				1155					1160							
tcg	gcg	gac	gag	gct	cg	aat	gcc	ctc	ccc	ccg	att	ccc	aga	gta		3753		
Ser	Ala	Asp	Glu	Ala	Arg	Asn	Ala	Leu	Pro	Pro	Ile	Pro	Arg	Val				
		1165				1170					1175							
atg	tgg	ccg	ccc	ggt	ttt	ggg	gcc	gcg	gag	acg	gtg	ttg	gag	ggg		3798		
Met	Trp	Pro	Pro	Gly	Phe	Gly	Ala	Ala	Glu	Thr	Val	Leu	Glu	Gly				
		1180				1185					1190							
agc	gac	gga	aca	cg	t	tc	gc	t	tc	gac	ca	gg	gg	tc	gaa		3843	
Ser	Asp	Gly	Thr	Arg	Phe	Ala	Phe	Gly	His	His	Gly	Gly	Ser	Glu				
		1195				1200					1205							
cg	ccg	gca	gaa	acc	cag	gc	gg	cg	ca	cgg	cg	cc	gca	gac		3888		
Arg	Pro	Ala	Glu	Thr	Gln	Ala	Gly	Arg	Gln	Arg	Arg	Thr	Ala	Asp				
		1210			1215					1220								
gac	aga	gaa	cac	gct	tt	tg	gag	cc	gac	gat	t	gg	gag	gt	gg	tgt		3933
Asp	Arg	Glu	His	Ala	Leu	Glu	Pro	Asp	Asp	Trp	Glu	Val	Gly	Cys				
		1225			1230					1235								
gaa	gac	gc	tgg	gac	agc	gag	gg	gg	gc	gg	gac	gag	gg	gac		3978		
Glu	Asp	Ala	Trp	Asp	Ser	Glu	Glu	Gly	Gly	Gly	Asp	Asp	Gly	Asp				
		1240			1245					1250								
gca	ccg	gg	tca	tcc	ttt	gg	gt	agc	gtc	gt	tc	gt	gg	cc	cg		4023	
Ala	Pro	Gly	Ser	Ser	Phe	Gly	Val	Ser	Val	Val	Ser	Val	Al					